

In the claims:

Please amend claim 1 as follows. The following list of claims replaces all preceding lists of claims.

1. (currently amended) An omni directional antenna, comprising:  
a substrate, the substrate comprising a radiation portion and a power feed portion, wherein a surface of the substrate defines a plane;  
  
a plurality of radiating elements coupled to the radiation portion of the substrate;  
  
the plurality of radiating elements producing at least a first omni directional radiation pattern at a first operating frequency and a second omni directional radiation pattern at a second operating frequency;  
  
at least one power dissipation element coupled to the power feed portion of the substrate;  
  
a power feed coupled to the plurality of radiating elements; and  
  
a ground coupled to the at least one power dissipation element, such that the at least one power dissipation element reduces an impact of the power feed on a the first omni directional radiation pattern and the second omni directional radiation pattern of the omni directional antenna.
2. (original) The omni directional antenna according to claim 1, wherein the substrate comprises a printed circuit board.
3. (original) The omni directional antenna according to claim 1, wherein the plurality of radiating elements comprise a corresponding plurality of lengths.
4. (original) The omni directional antenna according to claim 3, wherein at least two of the corresponding plurality of lengths are identical.

5. (original) The omni directional antenna according to claim 3, wherein at least two of the corresponding plurality of lengths are different.

6. (original) The omni directional antenna according to claim 1, wherein the plurality of radiating elements correspond to the number of the at least one power dissipation elements.

7. (original) The omni directional antenna according to claim 1, wherein the power feed comprises a conductor of a coaxial cable and the ground comprises a jacket of the coaxial cable.

8. (original) The omni directional antenna according to claim 7, wherein the jacket of the coaxial cable is coupled to the at least one power dissipation element along a length thereof.

9. (original) The omni directional antenna according to claim 1, wherein the plurality of radiating elements comprises two radiating elements.

10. (original) The omni directional antenna according to claim 9, wherein the two radiating elements have different lengths.

11. (original) The omni directional antenna according to claim 1, wherein the at least one power dissipation element comprises three power dissipation elements.

12. (original) The omni directional antenna according to claim 11, wherein at least one of the three power dissipation elements has a different length than at least one of the other two power dissipation elements.

13. (original) The omni directional antenna according to claim 8, wherein the at least one power dissipation element comprises three power dissipation elements.

14. (original) The omni directional antenna according to claim 1, wherein the plurality of radiating elements reside in a plane substantially parallel to the plane defined by the substrate.

15. (currently amended) An omni directional antenna, comprising:

a radiation portion;

a power feed portion coupled to the radiation portion;

the radiation portion comprising a plurality of radiating elements, wherein each of the plurality of radiating elements are arranged in a face-to-face configuration;

the plurality of radiating elements producing at least a first omni directional radiation pattern at a first operating frequency and a second omni directional radiation pattern at a second operating frequency;

the power feed portion comprising a plurality of power dissipation elements, wherein each of the plurality of power dissipation elements are arranged in the face-to-face configuration;

a power feed coupled to the radiation portion; and

a ground coupled to the plurality of power dissipation elements, such that the plurality of power dissipation elements reduce an impact of the power feed on a the first omni directional radiation pattern and the second omni directional radiation pattern of the omni directional antenna.

16. (original) The omni directional antenna according to claim 15, wherein the plurality of radiating elements are separated by at least one distance.

17. (original) The omni directional antenna according to claim 15, wherein at the plurality of radiating elements comprise a corresponding plurality of lengths.

18. (original) The omni directional antenna according to claim 17, wherein at least one of the plurality of lengths is identical to another of the plurality of lengths.

19. (original) The omni directional antenna according to claim 17, wherein at least one of the plurality of lengths is different to another of the plurality of lengths.

20. (original) The omni directional antenna according to claim 15, wherein the power feed a conductor of a coaxial cable and the ground is an outer jacket of the coaxial cable.

21. (original) The omni directional antenna according to claim 20, wherein the coupling between the radiation portion and the power feed portion comprises the coaxial cable.

22. (original) The omni directional antenna according to claim 15, wherein the coupling between the radiation portion and the power feed portion comprises at least one non-conducting post.

23. (original) The omni directional antenna according to claim 15, wherein the face-to-face configuration arranges the plurality of radiating elements and the plurality of power dissipation elements in a substantially parallel arrangement.

24. (original) The omni directional antenna according to claim 15, wherein the plurality of radiating elements comprise two radiating elements.

25. (original) The omni directional antenna according to claim 24, wherein the two radiating elements converge.

26. (original) The omni directional antenna according to claim 24, wherein the two radiating elements diverge.

27. (currently amended) An omni directional antenna, comprising:

a substrate, the substrate comprising a radiation portion and a power feed portion, wherein a surface of the substrate defines a shape other than a plane;

a plurality of radiating elements coupled to the radiation portion of the substrate;

the plurality of radiating elements producing at least a first omni directional radiation pattern at a first operating frequency and a second omni directional radiation pattern at a second operating frequency;

at least one power dissipation element coupled to the power feed portion of the substrate;

a power feed coupled to the plurality of radiating elements; and

a ground coupled to the at least one power dissipation element, such that the at least one power dissipation element reduces an impact of the power feed on a the first omni directional radiation pattern and the second omni directional radiation pattern of the omni directional antenna.

28. (original) The omni directional antenna according to claim 27, wherein the substrate is formed of a flexible material.

29. (original) The omni directional antenna according to claim 27, wherein the substrate is formed of a non-flexible material.

30. (original) The omni directional antenna according to claim 29, wherein the non-flexible material is printed circuit board material.

31. (original) The omni directional antenna according to claim 30, wherein the printed circuit board material is molded using an injection mold.

32. (original) The omni directional antenna according to claim 27, wherein the power feed comprises a conductor of a coaxial cable and the ground comprises an outer jacket of the coaxial cable.